

Docket No. AUS9-2000-0316-US1

ABSTRACT OF THE DISCLOSURE

PERMANENT OPEN FIRMWARE PCI HOST BRIDGE (PHB) UNIT
5 ADDRESSING TO SUPPORT DYNAMIC MEMORY MAPPING AND SWAPPING
OF I/O DRAWERS

A method, system, and apparatus for managing input/output drawers within a data processing system is provided. In one embodiment, a service processor assigns a unique location identifier to each of a plurality of input/output drawers. Each of these unique location identifiers is stored in memory. The unique location identifier is used by the operating system to identify the input/output drawers in the system regardless how these input/output drawers are interconnected by cables. In this embodiment, the system firmware assigns another unique PCI-bridge identifier to each of a plurality of PCI Host bridges (PHBs) from all input/output drawers. The unique PCI-bridge identifier is used by the operating system to perform input/output processes to input/output devices associated with the plurality of PCI Host bridges from all input/output drawers such that the operating systems ODM object for each of the PCI Host bridges from an I/O drawer remains the same regardless of how the I/O drawer is interconnected in the system. When a new input/output drawer is added to the data processing system, the service processor assigns a new unique location identifier to the new input/output drawer ensuring that the unique location identifiers previously assigned to other I/O drawers are not used to identify the new I/O drawer.

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